

CLAIMS

1. Synthetic bitumen emulsion, that can be used in particular in making colored coatings, consisting essentially of clear binders and possibly colored pigments, characterized by the fact that it contains:

- at least one clear synthetic binder with a softening point or a ball-ring temperature (TBA), measured in accordance with the NF T 66-008 standard, that ranges between 30 and 100°C,
- at least one compound of the latex family, introduced in a quantity that ranges between 3 and 40% by weight of the emulsion,
- water
- and at least one emulsifying agent

2. Emulsion as set forth in claim 1, characterized by the fact that the compound of the latex family is chosen from among the acrylic polymers and natural or synthetic rubbers, that can be used in the form of a aqueous dispersion, chosen from the group consisting of:

- EPDM (ethylene-propylene-diene-monomer),
- EPM (ethylene-propylene monomer),
- the S.B.R. (styrene-butadiene rubber) statistic or S.B.S (styrene-butadiene-styrene) sequenced, linear or star-shaped, or S.I.S. (styrene-isoprene-styrene) styrene-butadiene copolymers,
- polyisobutylene,
- polybutadiene,
- polyisoprene,
- polychloroprene.

3. Emulsion as set forth in claim 1, characterized by the fact that the latex family compound is introduced in a quantity that ranges between 5 and 30% by weight of the emulsion.

4. Emulsion as set forth in claim 1, characterized by the fact that said clear synthetic binder contains at least one plasticizing agent with an oil fraction aromatic extract base and at least one structuring agent with an oil resin base.

5. Emulsion as set forth in claim 1, characterized by the fact that said clear synthetic binder contains at least one plasticizing agent with an aliphatic hydrocarbonic compound base, whose number of carbon atoms is greater than or

equal to 20, and at least one structuring agent with a cycloaliphatic hydrocarbonic polymer base.

6. Emulsion as set forth in claim 5, characterized by the fact that the plasticizing agent is chosen from among the group consisting of:

- natural or synthetic aliphatic oils,
- polymers with a low degree of polymerization, such as polyolefins,

7. Emulsion as set forth in claim 6, characterized by the fact that the aliphatic oils have an aniline point that is greater than or equal to 90°C (according to the ASTM D 611 method) and preferably greater than or equal to 110°C.

8. Emulsion as set forth in claim 6, characterized by the fact that the aliphatic oils are chosen from among the hydrogenated white oils, that contain at least 60% of paraffinic carbon atoms (according to the ASTM D 2140 method).

9. Emulsion as set forth in claim 6, characterized by the fact that the polymers that make up the plasticizing agent have a viscosity index (VI) (according to the ASTM D 2270 method) that is greater than or equal to 100, and preferably greater than or equal to 120.

10. Emulsion as set forth in claim 6, characterized by the fact that the polymers are of the polybutene type, with a molecular mass number that ranges between 900 and 2600 and a cinematic viscosity at 100°C (according to the ASTM D 445 method) that ranges between 200 and 4600 cSt (or mm²/s).

11. Emulsion as set forth in claim 5, characterized by the fact that the structuring agent is a polycycloaliphatic thermoplastic resin in particular of the polycyclopentane type, with a low molecular mass.

12. Emulsion as set forth in claim 11, characterized by the fact that polycyclopentane type thermoplastic resin has a softening point (ball-ring temperature) that is greater than 125°C, and a Gardner color index (according to the NFT 20-030 standard) of at the most 1.

13. Emulsion as set forth in claim 4, characterized by the fact that the ratio by weight between the structuring agent and the plasticizing agent ranges between 0.4 and 1.5.

14. Emulsion as set forth in claim 1, characterized by the fact that the plasticizing agent is introduced in a quantity that ranges between 40 and 70% by weight of the clear synthetic binder.

15. Emulsion as set forth in claim 1, characterized by the fact that clear synthetic binder has a penetrability that ranges between 20 and 300 tenths of a millimeter.

16. Emulsion as set forth in claim 1, characterized by the fact that the clear synthetic binder also contains either vinyl ethylene-acetate (EVA) or S.B.S sequenced styrene-butadiene type copolymers, or low density polyethylene type polymers.

17. Emulsion as set forth in claim 1 characterized by the fact that it contains:

- between 40 and 70% by mass of synthetic binder,
- between 5 and 30% by mass of latex,
- between 60 and 30% by mass of water,
- between 3 and 10% by mass of emulsifier;

18. Procedure for preparing an emulsion as set forth in claim 1, characterized by the fact that it consists of the following steps:

a) preparation of a synthetic binder, using a mixture that is substantially homogenous in its melted state of at least one plasticizing agent and at least one structuring agent,

b) emulsification of the synthetic binder obtained in a) using an aqueous solution of an emulsifying agent, while maintaining the mixture obtained at a temperature that is sufficient for obtaining a stable emulsion,

c) cooling of the emulsion and incorporation of the latex in the form of an emulsion, under agitation at room temperature,

19. Procedure as set forth in claim 18, characterized by the fact that step a) consists in mixing the components of the synthetic binder at a temperature that ranges between 180 and 200°C.

20. Procedure as set forth in claim 18, characterized by the fact that the second step b), consists of the incorporation into the synthetic binder, under agitation, of an emulsifying solution made from a non-ionic or cationic emulsifier, introduced at a ratio that ranges between 3 and 8% by mass of the emulsifying solution.

21. Procedure as set forth in claim 18, characterized by the fact that in step c) the incorporation of the latex emulsion, in particular non-ionic or cationic, is carried out at a ratio that ranges between approximately 15 and 30% by mass, at room temperature.

22. Procedure as set forth in claim 18, characterized by the fact that the synthetic binder is obtained by mixing a plasticizing agent that consists of an aliphatic

hydrocarbon compound, whose number of carbon atoms is greater than or equal to 20 and a structuring agent that consists of a cycloaliphatic hydrocarbon polymer.

23. Application of an emulsion as set forth in claim 1, to the making of a colored surface treatment on a dampproofing material, such as a membrane or coat, that consists of at least one base coat, characterized by the fact that the synthetic bitumen deposit, to which are added colored pigments, is obtained spreading this emulsion on the base coat and breaking down the emulsion by evaporation of its water.

24. Application as set forth in claim 23, characterized by the fact that the surface treatment layer has a ball-ring temperature (TBA) that is greater than 160°C.

25. Application of an emulsion as set forth claim 1, to the making of a colored surface treatment for cold roadway applications, such as sealing coats, cold poured coats, and slurries, on a support, characterized by the fact that the deposit of the synthetic binder, to which are added colored pigments and aggregates, is obtained by cold spreading and chemical break down of said emulsion.